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A Comparative Value Chain Analysis of Smallholder Burley Tobacco Production in Malawi – 2003/4 and 2009/10

MARTIN PROWSE AND JASON MOYER-LEE

Smallholders grow the majority of Malawi's main export crop – burley tobacco. We analyse this value chain segment for the 2003/4 and 2009/10 seasons. The comparison shows smallholder profits in 2003/4 were limited by two main factors: a cartel of leaf merchants at auction and inefficient marketing arrangements. In 2009/10, there was greater competition at auction, improvements in marketing, tighter state regulation (including minimum prices) and much more contract farming. The paper concludes by reflecting on aspects of the political economy of the tobacco industry at national and global levels.

Keywords: Malawi, smallholders, tobacco, value chain

INTRODUCTION

Malawi is the world's most tobacco-reliant economy, with the crop contributing around 60 per cent of foreign exchange earnings. Importantly, production is now dominated by smallholders, not estates. While the Malawi Congress Party (MCP) under President Kamuzu Banda pursued an estate-based development strategy from the late 1960s to around 1990 (when the two most lucrative types of tobacco – flue cured and burley – were reserved for the estate subsector), since 1990 smallholders have grown an increasing proportion of burley (an air-cured tobacco, used as a cheap filler in American-blend cigarettes) (see Orr 2000; Van Donge 2002a; Jaffee 2003; Peters 2006).¹ By the end of the 1990s, smallholders were growing 60 per cent of national production – averaging about 120,000 metric tonnes (MT) – concentrated in Kasungu district, Central Region, and Rumphi district, Northern Region (see Prowse 2009).

Although the shift from estate to smallholder production has generated plenty of academic interest (see Tobin and Knausenberger 1998; Jaffee 2003; Negri and Porto 2008), little attention has been paid to dynamics in the burley value chain.² There may be good reasons for this. Early research on burley reform was precipitated by the World Bank and USAID (see

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¹ From 1961 until 1968 (with political independence in 1964), the Malawian government promoted smallholder production on customary land (Kydd 1984; Mkandawire and Trust 1999).

² One exception is the study by Poulton et al. (2007).

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Zeller et al. 1998). By the early 2000s, most donor agencies had formally distanced themselves from the sector. It appears that the Framework Convention on Tobacco Control, tobacco's reputation as a pariah crop and lobbying from producers in the United States (US) led donors to disengage. A good example comes from a senior UK Department for International Development (DfID) employee, who, when asked about the backbone of the Malawian economy, stated bluntly 'we do not *do* tobacco'.

This paper uses primary research and secondary sources to conduct a value chain analysis of smallholder burley production from seed to export (Gereffi and Korzeniewicz 1994; Kaplinsky and Morris 2000). The paper compares the value chain segment across the 2003/4 and 2009/10 seasons to highlight changes to the institutional framework, profits/rents, governance and systemic efficiency. The primary research took place in Lilongwe and Kasungu district from August 2002 to June 2004, when two surveys, participatory rural appraisal techniques, semi-structured interviews, focus group discussions and ethnographic methods were conducted.³ Further short research trips to Lilongwe were completed in 2010–12, when semi-structured interviews were conducted and costs of production for 2009/10 were compiled from informants in Kasungu.

The paper argues that in 2003/4 smallholder profits from burley were limited by a cartel of leaf merchants at auction, and inefficient marketing arrangements. By 2009/10, the government had improved the marketing system and had attempted to increase competition on the floors. The paper details considerable changes to the industry during President Mutharika's era – minimum prices, new buyers at auction and district-level markets – some of which led to considerable conflict in the industry. The paper concludes by arguing that tobacco will only sustain Malawi's economy and society if the government engages and negotiates productively with both leaf merchants and cigarette manufacturers.

The paper consists of five further sections. The first discusses the particular value chain approach used. The second section offers an overview of smallholder production, marketing and key actors in 2003/4. The third section discusses the institutional framework, profits/rents, governance and systemic efficiency in 2003/4. The fourth section performs the same tasks for 2009/10. The fifth section discusses changes in the segment across the two time periods. The conclusion reflects on the political economy of Malawi's main industry.

AN APPROACH TO VALUE CHAIN ANALYSIS

Value chain analysis is a popular, if contested, heuristic tool in development studies. It maps the creation of a consumer product by tracking a single commodity from constituent materials, production, through trading and processing, to export and consumption. The approach has mainly been used to assess benefits and costs of economic restructuring from globalization (Gereffi et al. 2005). The key point here is that as value chains become more complex, increases in efficiency occur, particularly through increasing coordination of different nodes of the chain (Kaplinsky and Morris 2000).⁴

³ A household survey covered 127 households in four villages scattered across 25 km of rural Kasungu. This broad questionnaire included demographic characteristics, assets, livelihood activities and agronomic practices for three agricultural seasons. A follow-up tobacco survey was conducted with 46 households. Ethnography was conducted in Lilongwe and rural Kasungu (where one author lived for 14 months). Eight focus group discussions were held. Dozens of interviews were conducted in Kasungu and Lilongwe.

⁴ For example, manufactured products are now assembled through just-in-time production techniques, using low-inventory stocks and fewer capital goods for lead firms (Harvey 1990).

Similar trends have occurred in agricultural value chains. These have become more buyer-driven and vertically coordinated due to changing patterns of demand and supply (for a recent overview, see Prowse 2012). For example, on the demand side, population growth, income growth in emerging economies, greater urbanization, greater female participation in the workforce and increasingly discerning, quality-focused consumers have contributed to greater vertical coordination. On the supply side, liberalization of national marketing and trade, the collapse of international commodity agreements, increased product differentiation due to niche market requirements, and the greater importance of public and private standards (for both product and process attributes) have led to increased buyer control. Thus, agricultural commodity chains have become more integrated and globalized.⁵ Instead of supplying generic, standardized commodities, agriculture now supplies highly differentiated products fulfilling niche requirements, where lead firms exact strict demands on suppliers through vertical coordination (see Daviron and Gibbon 2002; Ponte 2002).

However, to map all of the activities in the production of an agricultural commodity is a very complex endeavour (consider packaging, printing and items used in processing). A more feasible approach is to investigate a particular *filière*, or value strand (Sturgeon 2001). Strands focus on one 'ingredient' in the final commodity. This reduces *breadth*, focusing attention – in this case, on burley tobacco leaves – by ignoring wider strands (such as tracing agrochemicals or processing materials). A second important distinction relates to *length*. It can be hard to map an entire chain due to spatial or commercial reasons. Mapping of the chain minus the activities of the lead firm, referred to as a *value chain segment* – by, for example, by tracing a commodity from seed to landed cost in the importing country – can be more straightforward. Decapitating a chain in this way can ignore vital actors, especially in a buyer-driven chain. It can also marginalize trade issues. However, studying a *segment* draws a boundary around research, focusing effort on intra-country production, marketing, processing and export.

Third, we analyse the segment in terms of four components: the institutional framework, profits/rents, governance and systemic efficiency. The *institutional framework* refers to international and domestic law and regulations that influence the chain. The central point here is that each value chain is embedded within multiple national, regional and global frameworks. At the national level, actors should adhere to regulations regarding licensing and taxation, as well as product and process standards. At each node, actors often agglomerate into unions/organizations to represent members' interests. At the regional and global level, actors are subject to two regimes: first, multilateral trade agreements (such as the World Trade Organization, the European Union (EU) or, in our case study here, the Common Market for Eastern and Southern Africa regulations), as well as bilateral trade reciprocity; and, second, the influence of regional/global product and process standards, such as classification and grading norms, and certain 'credence' factors, such as organic or fair-trade practices (or a lack of child labour).

Profits/rents are returns realized by actors through involvement in the segment. The most accurate proxy is the profit rates at each node, but as these are difficult to access, the metric of 'value added' can also be used (Gereffi et al. 2001). The extent to which actors realize rents (above-normal profits) is through insulating themselves from competition (Kaplinsky 2005).⁶

⁵ Reardon et al. (2009) outline how this process first occurred in wholesaling, then processing and more recently in retailing (as seen through the increasing market power of supermarkets).

⁶ Kaplinsky and Morris (2000) highlight four possible sources of rents: first, resource rents via accessing scarce natural resources; second, classical rents internal to, and constructed by, the firm through technological, human resource, organizational or marketing superiority; third, relational rents through better relationships with chain actors; and fourth, exogenous rents through policy, infrastructural and financial environments.

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Rents are created from scarcity, which allows higher returns than competitors, especially via creating barriers to entry. Agricultural chains have very low entry barriers for production, but higher barriers in processing and export nodes (and in high-value marketing, design and retail). The main channels through which barriers are created are, first, innovation and upgrading and, second, through strategies to limit competition.⁷ One example is the formation of cartels due to two sets of factors: market-created causes of largeness, and firm-created causes of largeness (Lipsey and Crystal 1999).⁸ Entry barriers explain how profits/rents are distributed.

Governance is the extent to which actors within a chain control, coordinate and exert power over other actors. Governance explains insertion of producers and firms in particular positions. Lead firms often control the ability of subordinate actors to upgrade activities, and coordinate and allocate roles to firms below them.⁹

Governance is closely linked to the fourth component of value chain analysis used here: *systemic efficiency*.¹⁰ As described above, due to production becoming more specialized, realizing surplus is now more dependent on increasing efficiency between nodes (Kaplinsky and Morris 2000). In other words, contemporary chains are shifting from market governance towards hierarchical and vertically coordinated forms (see Gereffi et al. 2005). We use this value chain framework as an organizing schema to gain insights into the tobacco industry in Malawi. We recognize the fuzziness in each component but do not try to contribute to definitional debates. Before comparing the smallholder burley value chain segment in the 2003/4 and 2009/10 seasons, we offer an overview of the global burley market before describing the annual cycle of smallholder burley production in Malawi.

Overview of the Global Tobacco Market

In line with increased global production in recent decades, the proportion of tobacco traded has increased from one fifth in the 1980s to one third in the early 2000s (Kabambe 2007). However, national markets are still a key source of demand. For example, while China is now the world's largest tobacco producer (mainly of flue), it mainly supplies domestic markets. Indeed, demand is such that China has moved from being a net exporter to a net importer in recent years (ibid.). Most production in the US (of both flue cured and burley) also meets domestic demand. In contrast, Brazil, another major producer that also grows both flue cured and burley, has increased exports from 150,000 MT in the early 1980s to 500,000 MT in the mid-2000s (Kabambe 2007).

⁷ Four 'typical' trajectories pursued by firms are: process upgrading (through increasing internal efficiency processes within nodes and segments); product upgrading (developing new products or improving old products); functional upgrading (altering the sequence and nature of activities within the firm, or shifting to a downstream node); and chain upgrading (moving to a new chain). Any, or a mix, of these upgrading trajectories can create scarcity and higher returns (Kaplinsky and Morris 2000).

⁸ Natural causes of largeness include economies of scale (where greater size decreases variable costs of production), a lack of competition due to the cost of capital goods required to enter a node and, third, economies of scope (where the smaller the firm, the greater the relative costs to compete in key markets). Firm-created causes of largeness include mergers/acquisitions (in pursuit of economies of scale), aggressive pricing (where firms infringing on a market are priced out of a market) and, third, aggression, intimidation and predation (where entrants to a node or market are threatened or have staff poached).

⁹ There are five key parameters subject to control in a chain: *what* is produced, *how* it produced, *when* it is produced, *how much* is produced and *price* (Humphrey and Schmitz 2001).

¹⁰ Systemic efficiency is often subsumed under governance in value chain studies. Here, it is separated to illuminate the increasing importance of vertical coordination within the segment.

Malawi is one of three major producers of burley, alongside Brazil and the US. Despite competition, demand for Malawian burley remains strong, as it has a good reputation as a flavourless, clean 'filler'. Moreover, while the Framework Convention on Tobacco Control (FCTC) has focused attention on the dangers of tobacco consumption, world demand is still increasing. Developing countries now account for a greater proportion of both production and consumption (Jaffee 2003). For example, the sales growth of Phillip Morris International (PMI), the largest buyer of Malawian tobacco, is driven by Asian economies with their increasing adult populations. Indeed, Indonesia represents PMI's biggest market by volume. There is high market concentration among cigarette manufacturers, with the top five – Chinese National Tobacco Corporation (41%), Philip Morris International (16%), British American Tobacco (13%), Japan Tobacco International (11%) and Imperial Tobacco (6%) – enjoying 87 per cent market share. We now introduce the reader to the annual cycle of smallholder burley production in Malawi and the main stakeholders in the segment.

THE ANNUAL CYCLE OF SMALLHOLDER BURLEY PRODUCTION¹¹

Smallholder burley production starts with preparing nurseries in August/September, long before the rains arrive in November/December.¹² A small portion of *dambo* (wetland) is tilled and prepared with basal fertilizer, mulch to protect seedlings and, occasionally, insecticides and fungicides.¹³ Later, further fertilizer is applied. Seedlings are hardened through clipping and reducing watering. In the months before the rains, the land is tilled using a handheld hoe (*kulima mizele*). When the rains arrive, seedlings are transplanted into ridges (*kudzala*), preferably at 60 cm intervals. Immediately after planting, basal fertilizer is applied (sourced from local traders or firms).¹⁴ The recommended fertilizer for basal dressing is Super D or D Compound (Chapola 1994). Very few smallholders use these fertilizers and instead use the cheaper 23:21 fertilizer (designed for maize). Many smallholders rely on credit to purchase fertilizer. High default rates have been an ongoing issue, often resulting in the dissolution and reformation of clubs.¹⁵

Following basal fertilizer, the land is weeded (*kupalila*) and a top dressing of fertilizer is applied 2 weeks after planting.¹⁶ Ridges are banked to prevent weeds. Flowers and suckers are removed to maximize leaf growth. By January, the lower leaves (flyings) are reaped (*kuthyola*). Yellowed leaves are sewn in bunches of four using dried grass and hung on wooden poles within a curing shed (*chigaffa*).¹⁷ Cured leaves, now reddish brown, are stored in an enclosed end of the shed. Weeks later, the cured leaves are conditioned – *kufewetsa* – graded (*kusankha*)

¹¹ The annual production cycle is of smallholder burley production in Kasungu district, based mainly on 2003/4. In this example, the smallholder is part of a burley 'club' and sells his or her bales on the auction floors in Lilongwe (see Negri and Porto 2008). The description of the segment includes the processing of burley in Malawi, and its export to Rotterdam, the Netherlands.

¹² Production is mainly based on unimodal rainfall from November/December to March/April.

¹³ Nursery beds should be rotated annually to prevent nematodes. The Agricultural Research Extension Trust (ARET) produces high-quality seed and commands up to 90% of the domestic market. ARET also offers extension and since 2006/7 has completed estimates of the annual costs of production (see ARET 2004; interview with Managing Director, TCC, December 2010).

¹⁴ For details of the fertiliser market, see Kabambe (2007).

¹⁵ For details of smallholder credit in the 1990s, see Jaffee (2003) and Diagne and Zeller (2001).

¹⁶ Most smallholders use the recommended top dressing of CAN, although urea is also used.

¹⁷ Ideally, the shed is maintained prior to the rains: termite-damaged timber is replaced, and new plastic sheeting and thatch are obtained. The curing rate is controlled through altering the spacing between poles.

according to size, colour and quality, and tied into hands (*kumanga ndindi*). Similar grades are compressed into hessian sacking to make a bale (requiring a press, two pieces of hessian and twine).

To market tobacco at auction, smallholders register their club with the Tobacco Control Commission (TCC).¹⁸ A club, usually between 12 and 20 people, receives a registration number and a marketing quota. To transport bales, clubs are affiliated to one of two main marketing channels: the Ministry of Agriculture/Tobacco Association of Malawi (TAMA); or a smallholder farmers' organization, such as the National Smallholder Farmers' Association of Malawi (NASFAM).¹⁹ These differ in terms of extension advice, access to credit and choice of transporter. While the Ministry of Agriculture (MoA) has an office in each Extension Planning Area, smallholders receive limited advice from officers. However, the MoA does facilitate access to credit institutions. MoA clubs market tobacco via the TAMA satellite depot system. In this respect, the system mirrors arrangements for estates.

Most smallholders register with a farmers' organization, such as NASFAM.²⁰ Individual NASFAM clubs are joined together into local Group Action Committees (GACs), which together form district-level associations. These, in turn, are aggregated into a national body. NASFAM clubs receive extension from the local association, which also sells inputs and provides a marketing channel for alternative crops such as soya and groundnuts. The association also acts as an intermediary for lenders, and collectively negotiates transport from GAC sheds to the auction floors, run by Auction Holdings.²¹

At the floors, bales wait outside on trucks until accepted into storage.²² When a bale reaches the floors, it is auctioned and bought by a leaf merchant in US dollars. In 2003/4, there were three main buyers of burley – Limbe Leaf, Stancom and Dimon – and one minor buyer: Africa Leaf. At this time, Limbe Leaf was the dominant leaf merchant. It was owned by the largest global leaf merchant, Universal Leaf (58%), and Press Corporation (42%), the largest limited company in Malawi. Stancom and Dimon were both wholly owned subsidiaries of US leaf companies (the second- and third-largest global leaf

¹⁸ The Tobacco Control Commission is a semi-autonomous organ of the Ministry of Agriculture. It oversees the industry, being responsible for crop estimates, marketing quotas, the arbitration of auction floor sales, defining classes and grades of tobacco, and licensing of floors, buyers and graders. Until recently, the TCC could withhold proceeds from overproduction for some weeks. The TCC board consists of key stakeholders from the industry, as well as political appointees. In 2009/10, the TCC was no longer viewed as neutral but as an organ of government (Matthews and Wilshaw 1992; interviews with Managing Director, TCC, December 2002, employees of leaf merchant companies, December 2010).

¹⁹ TAMA represented estate growers when smallholders were excluded from growing burley, and remains an influential stakeholder. In the early 2000s, the President of TAMA was the President of the International Tobacco Growers Association (ITGA). TAMA operates local-level depots where tobacco is stored and transported to auction. Smallholders now use this service (USAID 1991; Matthews and Wilshaw 1992; interviews with TAMA employees, January 2003).

²⁰ NASFAM emerged from USAID's involvement with burley reform. Originally created as the Smallholder Agricultural Development Project (SADP) in 1995, the project offered extension to smallholder clubs and facilitated access to credit. SADP expanded and in 1997, with further USAID funding, became NASFAM. While initially focusing on burley, NASFAM now encourages diversification through promoting coffee, chillies, rice, soya and cotton. USAID stopped direct support to NASFAM in the early 2000s (Riley 1997; SADP 1999; interviews with NASFAM employees, December 2002).

²¹ Auction Holdings Ltd was created in 1962 with the amalgamation of the Limbe and Lilongwe floors. In 1995, a third floor opened in Mzuzu. The auction floors facilitate the sale of tobacco to exporters, and the prompt payment of growers after deductions. The main shareholder of AHL is ADMARC (47%) (Matthews and Wilshaw 1992; interview with Managing Director AHL, May 2004, and Managing Director TCC, November 2010; shareholding data from Company House, Blantyre).

²² In 2003/4, delays stretched from weeks into months.

merchants, respectively). Africa Leaf was created when a previous company, Intabex Dibrell, was bought by Dimon.²³

The Tobacco Factory and Export

Once purchased, a bale is moved to an adjacent factory, stored according to grade and processed depending on a buyer's requirements. The purpose of processing is to remove lamina from stalk. Hands are placed on a conveyer belt, and are cut into tips, mid-rib and butts. Tips, which contain little stalk, are added at the end of the process. Butts are discarded. Mid-rib is conditioned with water and then passed through a thresher and on to a fan that blows lighter lamina away from heavier stalk (which is removed). Residual lamina is passed through finer threshers and dryers (which finally reduce moisture to 12%). This 'cut rag' is compressed into cartons weighing 180 kg. These are loaded into 20 foot containers that hold 48 boxes, weighing roughly 8,800 kg (including packaging). Containers are usually exported by road to Durban and Beira.²⁴ Between 1994 and 2003, the majority of Malawian burley tobacco was exported to cigarette manufacturers in the US, Europe and Japan.

In 2003/4, exports were monitored by the Tobacco Exporters Association of Malawi (TEAM), but data on cigarette manufacturers' purchases was difficult to access.²⁵ Informants suggested that Philip Morris International, British American Tobacco and Japan Tobacco International were major buyers. Figure 1 offers a simple illustration of key stakeholders in 2003/4. This introduction to the annual production cycle and main actors within the segment allows us to compare the institutional framework, profits/rents, governance and systemic efficiency in 2003/4 and 2009/10.

THE BURLEY TOBACCO VALUE CHAIN SEGMENT IN 2003/4

The Institutional Framework

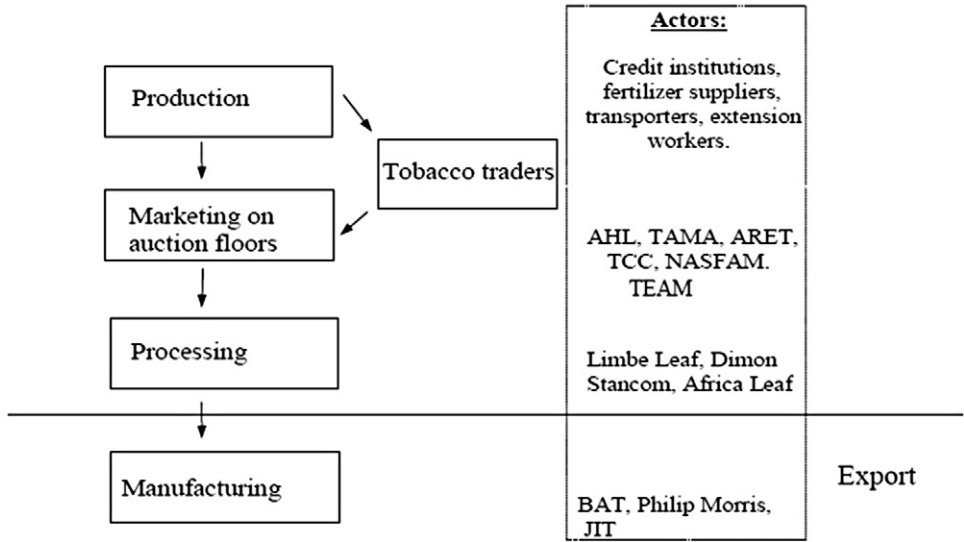
Kabambe (2007) outlines how most countries impose border tariffs on tobacco imports, with the average tariff set at around 38 per cent. Certain countries impose very high tariffs, including the US (68%). However, as a least developed country (LDC), in 2003/4 Malawi enjoyed duty-free access to US markets through the Agricultural Growth and Opportunity Act (AGOA) (US Government 2000). While burley and flue imports were not included in the Generalized System of Preferences (GSP) programme (see US Government 1999), AGOA included processed and unprocessed burley under product lines 2401.1061/63 and 2401.203133. The Harmonized Tariff Schedule of the US Government (2004) highlights how Malawian burley imports destined for cigarette manufacture were subject to a 12,000 MT quota per annum. Such trade protection harmed Malawi and Malawian tobacco growers.

²³ Limbe Leaf, Stancom and Intabex Dibrell located in Malawi in the 1960s. Limbe Leaf became the dominant leaf merchant with the withdrawal of the Imperial Tobacco Company in the early 1980s (shareholding data from Company House, Blantyre; Matthews and Wilshaw 1992).

²⁴ Before 2003, exports also went via rail to Nacala. In the early 1990s, some went via Dar es Salaam.

²⁵ TEAM was created in 1930 and oversaw the export of tobacco to over 60 countries. This included liaising with the Reserve Bank of Malawi, the Malawi Revenue Authority, and the Ministry of Commerce and Industry. The members of TEAM were leaf companies and a few estate owners. TEAM represented leaf merchants' interests in policy meetings (Matthews and Wilshaw 1992; interview with Managing Director TCC, December 2002).

Figure 1 A simplified supply thread of smallholder burley tobacco production, showing the key stakeholders in 2003/4



Source: Authors' illustration.

Moreover, in the US tobacco farming was directly supported for decades under a quota and minimum price system created in the 1930s to stabilize prices. This existed until 2003. Indirect support still occurs at the state and/or local level, including free (or cheap) extension services or soil analysis. Other countries such as China and India also support production through subsidized inputs.

The trade regime in the EU was slightly more progressive. In 2004, Malawi enjoyed preferential access to EU markets for burley under the ACP Cotonou agreement and the Everything but Arms (EBA) initiative. For example, in 2002 the EU (27) imported almost €89 million of burley from Malawi, which equated to around 20 per cent market share, with no tariffs (Stevens 2004; Eurostat 2011). In 2003 and 2004, the value of burley imports into the EU appears to have dropped to around €59 million and €37 million, respectively (apparently due to lower demand from Germany). Similar to the US, during this period the EU moved to curtail price support offered to tobacco growers (Stevens 2004).²⁶

At the national level, the main actors in 2003/4 were regulated by the TCC acting as a referee. Such a role was not straightforward. The TCC balanced numerous competing interests, including political interference. For example, although the TCC was answerable to the Minister of Agriculture, during the United Democratic Front (UDF) era (1994–2004) tobacco policy often came from presidential directives. Moreover, key political appointees sat on the TCC board and directors of key tobacco institutions were close to the political elite (as were some personnel in Limbe Leaf).²⁷ On the other hand, the organ representing estate owners – TAMA – had closer links with the MCP.

²⁶ Through changing production-linked payments to a single-farm payment.

²⁷ The UDF elite had investments in construction, transportation and trading, including tobacco.

Table 1. Smallholder burley tobacco costs of production, 2003/4 – Kasungu

	MWK	MWK per kilogram
1. Production costs	21,226.52	42.45
2. Marketing costs	9,983.75	19.97
3. Total costs	31,210.27	62.42
4. Gross proceeds	59,400.00	118.80
5. Net margin (4 – 3)	28,189.73	56.38
MWK28,189.73 = US\$261.02	MWK56.38 per kilogram = US\$0.52 per kilogram	

Notes: Based on 500 kg/1 acre/five bales/\$1.10 per kilogram. MWK108 = US\$1.

In 2003/4, the sector was also subject to four standards and credence issues: methyl bromide; child labour; non tobacco-related materials (NTRM); and, most importantly, the Framework Convention on Tobacco Control (FCTC). Methyl bromide was once widely used on nurseries to reduce nematodes. Its use has been restricted by the Montreal Protocol and has been phased out.²⁸ Second, since the late 1990s, cigarette manufacturers have become increasingly concerned with child labour. In 2000, manufacturers and growers' organizations created a global NGO – Eliminating Child Labour in Tobacco (ECLT) – as part of their corporate social responsibility strategy.²⁹ In Malawi, leaf companies along with BAT financed the creation of an NGO – Together Ensuring Children's Security (TECS) – to campaign on child labour issues. The third credence factor was non-tobacco-related materials (NTRM). Leaf merchants became concerned with smallholders tying tobacco with polypropylene strips (from fertilizer bags) because manufacturers feared litigation.³⁰ The seriousness of this issue was illustrated in 2004, when Philip Morris cancelled all orders for burley.³¹

The last element of the global institutional framework discussed here is the Framework Convention for Tobacco Control (FCTC).³² Due to concerns over public health, this treaty has attempted to limit tobacco consumption and production. Clearly, as Malawi is dependent on tobacco, any limits on production could have serious implications. We return to these credence factors in the 2009/10 season. We now turn to smallholder profits in 2003/4.

Smallholder Profits in 2003/4

The costs of production and marketing for a smallholder credit recipient in Kasungu for the 2003/2004 season are summarized in Table 1 (full details are available in Prowse 2011). These figures follow the annual cycle outlined above, and are for an intensive model of production (without imputing the cost of household labour).³³ The data come from a tobacco-specific survey in 2004 and semi-structured interviews at this time, as well as the experience of one

²⁸ Instead, farmers are encouraged (with little success) to use alternative pesticides or floating seed trays.

²⁹ See <http://www.eclt.org/index.html> (accessed 16 May 2005).

³⁰ Some fertilizer bags in Malawi are made from thin woven plastic strips that unravel easily.

³¹ This led to Lilongwe auction floors operating at 50 per cent capacity.

³² See http://www.fctc.org/about_FCTC/, <http://www.who.int/gb/fctc/> (accessed 16 May 2005).

³³ Overall, the intensive model employed assumes a smallholder yield of 500 kg per acre. This assumption reflects yields of better-off smallholder growers in Kasungu. While the average smallholder burley yield in Kasungu Agricultural Development District (ADD) in 2001 was 280.4 per acre (701 per hectare) (Mwasikakata 2003), and the tobacco-specific survey in 2004 found a figure of 360 kg per acre, these figures were reduced by the low yields of low-intensity producers.

author in growing and marketing burley in Kasungu. The costs of production for this intensive model (with credit) suggest a net margin of only 52.2 cents per kilogram. Thus, a smallholder using credit and marketing 500 kg at auction received a net profit of US\$261.02.³⁴

Marketing Channels

In 2003/4, smallholders in Kasungu had three marketing channels. While the auction was most popular, smallholders also used intermediate buyers (IBs) and cross-border trade (CBT). IBs were introduced in 1993/1994 and were most active in 1997, when they brought 20,000 tons (around 15%) of the national burley crop to auction (Jaffee 2003). IBs were mainly traders and transporters with no real tobacco experience (Van Donge 2002a). IBs were slowly restricted from the late 1990s and banned from 2002. But this does not mean that the practice ended: instead, IBs market tobacco through their own or an associate's registration number. The CBT is hard to quantify.³⁵ It consisted of smallholders taking bales into neighbouring countries, to buying stations next to the border run by the same main leaf merchant companies as in Malawi (Universal Leaf, Stancom and Dimon). Jaffee (2003) suggests that in 2001, at least 10,000 tons of Malawian-produced burley was taken into adjacent countries for sale (8% of national production). Other estimates are much greater (see TEAM 2002).

The choice of marketing channel strongly influences profitability. Table 2 compares smallholder net margins for each channel (with auction sales using NASFAM transport).³⁶ The model of a non-credit grower in 2003/4 produces a net margin of 59 cents per kilogram from auction. Selling burley in Zambia yielded a net margin of 41 cents per kilogram. However, marketing burley through an IB yielded only 2 cents per kilogram. This highlights three functions of IBs in the rural economy: first, they are an instant source of liquidity at the start of the marketing season; second, they are a channel for small-scale low-intensity producers (who sell tobacco in hands); and third, they are a channel for low-quality leaf, such as flyings.³⁷

The difference in profitability between the auction floors and the CBT (around 18 cents per kilogram) poses the question: Why did smallholders send bales abroad in light of the risks involved? Part of the popularity of the CBT in 2003/4 was due to (sometimes indebted) clubs avoiding loan repayments (automatically deducted by Auction Holdings from growers' gross proceeds). A further factor was liquidity. Buying stations in Zambia pay within 3–4 days. In 2003/4, payment from the auction floors took at least 3–4 weeks, if not months.

Levies Accrued by Tobacco-Related Institutions

Higher profits, the institutional structure of the industry and path dependence ensured that most burley tobacco was sold at auction, where numerous deductions are made on behalf of tobacco-related institutions. Table 3 shows these for the 2003/4 season.

³⁴ Analysis by Keyser and Lungu (1997) in the mid-1990s suggested that only tomatoes and paprika approached this level of profitability.

³⁵ A report by Nakhumwa and Minde (1996) on informal cross-border trade fails to mention tobacco, suggesting how this practice emerged in the late 1990s.

³⁶ Table 2 uses the same intensive model of smallholder burley production as Table 1, but without credit to avoid non-repayment of loans skewing the comparison. For full details, see Prowse (2011).

³⁷ Many smallholders use multiple marketing channels each season: for example, first selling to an IB to access money, and subsequently sending bales to auction.

Table 2. Smallholder burley tobacco costs of production using different marketing channels, 2003/4 – Kasungu

	<i>Auction floors (MWK)</i>	<i>Cross-border trade (MWK)</i>	<i>Trader/IB (MWK)</i>
1. Production costs	17,814.17	17,814.17	17,814.17
2. Marketing costs	9,983.75	4,920.00	1,000
3. Total costs	27,797.92	22,734.17	18,814.17
4. Gross proceeds			
Auction floors = MWK118.80 per kilogram	59,400.00		
Cross-border trade = MWK90 per kilogram		45,000.00	
Trader/IB = MWK40 per kilogram			20,000.00
5. Net margin (4 – 3)	31,602.08	22,265.83	1,185.83
MWK per kilogram	63.20	44.53	2.37
US\$	292.61	206.17	10.98
US\$ per kilogram	0.59	0.41	0.02

Notes: Based on 500 kg/1 acre/five bales/\$1.10 per kilogram. MWK108 = US\$1. No credit.

Table 3. Levies and deductions on the auction floors in 2004

TCC levy	0.10 cents per kilogram
AHL levy	3.25% of total proceeds
Hessian levy	30 cents per bale (TAMA)
ARET levy	1% of total proceeds
TAMA/NASFAM levy	0.70 cents per kilogram applicable to institution members
Classification levy	Undertaken by TCC at no additional cost
Withholding tax of 7%	Not applied to smallholders earning less than MWK36,000
Transport	Variable

Sources: Government of Malawi (2004); interviews in Lilongwe and Kasungu.

These deductions amounted to 6.48 cents per kilogram, representing 12.4 per cent of smallholders' net margin. The extent to which deductions are appropriate to services rendered has been contentious. The auction system has been depicted as over-regulated and inefficient (see World Bank 2004a). While deductions by tobacco institutions were certainly excessive in the past (see SADP 1999), the levies in 2003/4 appear less onerous (see World Bank 2004b).

Processing and Export of Tobacco in 2003/4

Table 4 shows estimated costs of processing and exporting burley by a leaf merchant, up to an estimated landed price of US \$5 per kilogram, paid by a cigarette manufacturer at Rotterdam in 2004. As it is extremely difficult to get price information from leaf merchants, US\$5 is an average figure suggested by informants in the 'trade'.

Table 4 shows at an assumed sale price of US \$5 leaf merchants' net margin is 243 cents per kilogram. The considerable profits made from processing explain why leaf merchants aggressively protected their node of the value chain segment.

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Table 4. Costs of processing and export per kilogram in 2004 (US cents)

Processing costs	
Auction floor price	110
Buyer overhead costs	11
Short-term storage costs	2
Threshing costs	15
Yield (70%)	41.33
Re-drying and packaging	25
Materials	11
Interest (3 months at 8.5% p.a.)	4.57
Total processing costs	109.9
Purchase and processing costs	219.9
Shipping costs	
Transport to Durban and port charges	15
Insurance	3.66
Ocean freight to Europe	18
Total shipping costs	36.66
Total purchase and processing costs	256.56
Manufacturers' payment for landed burley	500
Leaf merchants' profit	243.44

Sources: Based on Jaffee 2003; interviews in Lilongwe 2004.

Notes: Yield (70%) refers to the amount of lamina extracted during processing.

Governance in 2003/4

The global tobacco value chain is driven by the main cigarette manufacturers. At the start of each season, manufacturers *jointly* instruct leaf merchants as to the 'trade' requirements. For the 2004 season, these were 135–140 million kg of burley, 15–20 million kg of flue and 5–7 million kg of fire-cured tobacco (TCC 2004). The governance of the global chain by manufacturers has led to 'obligatory contractual relations', where the security of supply, and familiarity of suppliers, is deemed more important than price.

Within Malawi, the value chain segment is itself buyer driven, by the leaf merchants. In 2003/4, Limbe Leaf was the dominant merchant and was the leading actor in a cartel that depressed prices and protected high-rent activities. The allegation that leaf companies operated as a cartel at auction (Van Donge 2002a; Jaffee 2003; Hayward 2004; Stanbrook 2005a,b) is confirmed by key informant interviews and Auction Holdings sales figures for 2004.³⁸ Informants claimed the burley market in 2004 was carved up each day, with Limbe Leaf (LL) buying 46 per cent and the other two main leaf companies – Stancom (S) and Dimon (D) – 23 per cent. The smallest company, Africa Leaf (AF), purchased 8 per cent. Moreover, informants suggested that leaf companies 'shared out' bales in a predetermined buying sequence: LL, S, D, LL, LL, S, D, AF, LL, S, D, LL, LL, S, D and AF. This claim is supported by data from Auction Holdings from June 2004, provided by the General Manager and randomly

³⁸ The alleged collusion and operation of a cartel in the tobacco market in Malawi in 2003/4 is symptomatic of the structure of the global tobacco market. For example, leaf merchants were fined by the European Commission in 2006 for collusion in both Spain and Italy. It should be noted that Clive Stanbrook was the government's QC in a case brought against the leaf merchant companies.

Table 5. Bales bought by different leaf companies and Auction Holdings

Company	Number of bales	Percentage	Average price	Standard deviation
Limbe Leaf	305	39.1	118.17	17.60
Stancom	170	21.8	121.36	20.21
Dimon	160	20.5	120.01	18.80
Africa	67	8.6	120.82	22.73
Auction Holdings	79	10.1	135.26	16.41
Total	781	100.0	121.18	19.38

Source: Auction Holdings data.

selected from records. It contains information on 781 bales. Table 5 shows descriptive statistics of bales bought by each company. The proportion of bales corresponds broadly to the breakdown of purchases described above (if one reapportions the 10% of bales 'bought' by the house to the four companies).³⁹ Once Auction Holdings' bales are removed, there is no statistically significant difference in the prices paid by companies.⁴⁰

Importantly, the auction data allows us to investigate the order in which companies purchased tobacco. The buying sequence suggests that three companies tended to purchase a bale immediately after another company: Stancom after Limbe Leaf; Dimon after Stancom; and Africa Leaf after Dimon. We tested these propositions by using three logistic regression models.⁴¹ The results show a great degree of similarity to the buying pattern suggested by informants.

Specifically, the Stancom model has only one statistically significant variable: the dummy variable representing whether Limbe Leaf bought the previous bale (as highlighted in the buying sequence suggested by informants). The strength of this relationship accounts for practically all the predictive power of the model (significant at the 99.9% level). The odds ratios show, with all else constant, that Limbe Leaf buying the previous bale made Stancom three times more likely to purchase a bale.⁴² The Dimon model also shows one significant variable: Stancom buying the previous bale (at the 99% level). *Ceteris paribus*, Stancom purchasing the previous bale made Dimon two and a half times more likely to buy.⁴³ Lastly, the Africa Leaf model has one variable significant at the 90 per cent level: the Dimon dummy. However, the strength of this relationship was not sufficient to contribute to a statistically significant model.⁴⁴ Thus, the first two models provide statistical evidence that leaf buyers operated a cartel on the auction floors in 2004.

³⁹ The higher prices 'paid' by Auction Holdings simply reflect the reserve price.

⁴⁰ An analysis of variance produces an *F*-statistic of 1.173 and a significance figure of 0.319.

⁴¹ The dependent variable in each model was a dummy representing the bales that the leaf company in question (namely, Stancom, Dimon and Africa Leaf) purchased. The independent variables in each model are dummies representing whether each of the other buyers bought the previous bale, plus a price variable. Models were run in five blocks.

⁴² The strength of this relationship again accounts for almost all predictive power (significant at the 99% level): Wald statistic, 10.822; sig., 0.001; exp(*B*), 3.04; model chi-squared, 48.71; degrees of freedom, 5; model significance, 0.000.

⁴³ Wald statistic, 6.796; sig., 0.009; exp(*B*), 2.46; model chi-squared, 22.28; degrees of freedom, 5; model significance, 0.000.

⁴⁴ Wald statistic, 3.391; sig., 0.066; exp(*B*), 2.828; model chi-squared, 7.026; degrees of freedom, 5; model significance, 0.219.

Informants also claimed that Limbe Leaf set price bands to ensure price stability, and ensured compliance through pricing other companies out of the auction if bands were broken. It was also claimed that the cartel stymied the emergence of new firms in the industry. Leaf companies' control over capital goods for processing tobacco limited new entrants into the sector. Attempts by other stakeholders to gain experience in exporting tobacco were consistently blocked.⁴⁵

While there is strong evidence a buying cartel operated in 2003/4, it needs to be put in context: leaf companies also maintained an 'obligation' to growers, as they guaranteed to purchase the entire tobacco crop (to 'mop up the market'). The strength of these 'obligations' was much greater prior to the liberalization of burley, as leaf companies agreed to buy all types of burley within a price band of between US\$1 and US\$1.50 per kilogram (Van Donge 2002a). In 2003/4, this price band did not hold, and low-quality burley received very low prices (but leaf merchants did purchase *all* tobacco presented).

Systemic Efficiency in 2003/4

Systemic efficiency leads to much greater governance of the value chain by lead firms. In our case here, it mainly involves vertical coordination through contract farming. The past two decades have seen a significant increase in contract farming by leaf merchant companies – such as Universal Leaf – and also by cigarette manufacturers, such as BAT, across Southern and Eastern Africa. However, contract farming has only emerged relatively recently in Malawi.

Formal contract farming of tobacco (defined here as when a firm lends inputs, such as seed, fertilizer, credit and extension, to a farmer in exchange for exclusive purchasing rights over the resultant crop) started in Malawi in 2001/2, when Stancom arranged a facility of US\$3million through Citibank to provide finance for inputs on Press Agriculture Estates.⁴⁶ In 2002/3, Limbe Leaf asserted its dominance. They signed a 5-year deal with Press Agriculture to produce flue on 65 estates to substitute for reduced production in Zimbabwe. Importantly, Limbe Leaf received special dispensation from President Muluzi to bypass the auction floors and take the leaf straight from Press Agriculture estates to Limbe Leaf's factories.

Soon, most large-scale estates in the country, both 'public' and private, were contracted by leaf merchants, and all firms were allowed to take tobacco straight to factories. But due to concerns that leaf companies were under-declaring production through smuggling tobacco to avoid liabilities, direct transportation of contracted tobacco to factories was prohibited from 2003/4.⁴⁷ Instead, all contracted tobacco is marketed through a 'silent' auction system on the floors, where prices for contracted tobacco are fixed by a neutral party according to pre-determined grades (TCC 2004).

⁴⁵ One example is the attempt to liberalize the export of tobacco. In 2002, the government issued a directive for the TCC to investigate export liberalization ensuring integrity of exports and repatriation of foreign exchange. The leaf companies were not enthusiastic about this. When a pilot phase of export liberalization was announced at the 2003 tobacco seminar, the leaf merchants reacted immediately: the CEO of Limbe Leaf threatened that this move could lead to a withdrawal of capital investments and shift to neighbouring countries. This was not an idle threat, as the firm had recently invested in processing facilities in Tete.

⁴⁶ Press Agriculture was at the centre of large-scale estate expansion in the 1970s, with Dr Banda and the MCP elite prime beneficiaries. Through the late 1990s, Press Agriculture became less profitable – until 2000, when tobacco production on the hundred or more estates collapsed (Lynx Associates 2002; Van Donge 2002b).

⁴⁷ WTO (2010) highlights that export surrender requirements of 40% of foreign exchange receipts are in place for tobacco exports. Moreover, tobacco exports were directly taxed by government in recent years.

The leaf merchants also started contracting smallholders. The precedent was Limbe Leaf's purchase of the Kasungu Flue-Cured Tobacco Authority (KFCTA) in 2000. In 2001/2, Limbe Leaf contracted 900 KFCTA smallholders to produce flue.⁴⁸ In 2002/3, Dimon contracted 2,500 smallholders in Kasungu, Lilongwe, Mzimba and Rumphu. This contracted tobacco also passed through the 'silent' auction. We now move forward 6 years to assess the institutional framework, profits/rents, governance and systemic efficiency in 2009/10.

THE BURLEY TOBACCO SEGMENT IN 2009/10

The Institutional Framework

Overall, tobacco's share of total exports in Malawi increased from 49 per cent to 67 per cent by value from 2004 to 2008 (due to both higher prices and production) (WTO 2010). These figures for total agricultural exports suggest that increased imports by the EU account for some of this increase. Export data for 2009 from the TCC support this interpretation: Belgium was the main destination (with almost 32,000 MT, followed by Russia and the US, at around 10,000 MT each).

However, there are indications that Malawi is exporting less processed leaf. Figures from Eurostat (2011) show that imports of stripped burley leaf to the EU declined from 38 million in 2004 to just over 10 million in 2008, suggesting that a greater proportion of Malawian burley has been imported unprocessed. Moreover, WTO (2010) highlights how 73 per cent of total Malawian tobacco exports (by value) in 2008 was unprocessed. Naturally, exporting unprocessed leaf leaves less value in Malawi. As these figures do not correspond with the breakdown of burley exports in 2009 reported by the TCC (which shows that 86% of exports by weight were stripped leaf and 14% unprocessed scraps, stems and leaves), this issue requires further investigation. If Malawi has been exporting more unprocessed burley, this suggests a process of downgrading within the value chain. Turning to trade regimes, and just as in 2003/4, while Malawi qualified for duty-free access to the US under AGOA, the Harmonized Tariff Schedule of the US Government (2010) highlights how burley for cigarette manufacture was still subject to a 12,000 MT quota per annum (which continued to harm Malawi and its tobacco producers).

In addition to trade, the major changes to the institutional framework concerned five credence factors and domestic-level regulations. First, in 2009/10 the ILO was still lobbying hard on child labour. For example, the ILO initiative Eliminating Child Labour in Tobacco was active in Malawi, collaborating with Philip Morris International. Second, non-tobacco-related materials (NTRM), such as the inclusion of plastic, was still causing concern. Third, while Malawi is not a signatory to the Framework Convention on Tobacco Control, voices within government now argued that the country should sign and lobby from within the Convention. Fourth, green tobacco sickness became an important issue. While this condition is not so prevalent in Malawi compared to Brazil (which has higher humidity levels and thus a greater propensity for nicotine absorption through the skin), a campaign by Plan International raised the profile of this issue. Fifth, a major change relates to additives in cigarettes. Some tobacco, such as the Malawian burley used in American-blend cigarettes, is less palatable without flavourings or additives. Canada recently banned additives, making American-blend

⁴⁸ Land that had reverted to customary status.

cigarettes unsellable in that country. The US also recently banned all flavourings except menthol (Brown, pers. comm., 26 April 2011). Such measures reduce demand for Malawian burley.

The Malawian institutional framework also changed considerably over the 6-year period. The first change was the introduction of district markets. In 2009/10 there were two district markets, one in Kasungu district at Chinkhoma and one in the Southern Region at Ngodi. These markets undermined and effectively replaced the cross-border trade. The second major change was the introduction of minimum prices. On the basis of costs of production created by ARET, since 2007/8 the government has set minimum prices each season for 86 grades of burley. Buyers were required to sign a contract with the government each season, with minimum prices enforced by the TCC. The government claims that the process is transparent, with minimum prices set at the annual tobacco seminar. The aim of the policy is to increase producer prices and prevent price disputes halting sales at auction. When introduced, the government intended smallholders to realize a 30 per cent net margin.

However, in 2008 and 2009, the leaf companies did not meet the terms of their contract.⁴⁹ For example, the average target price in 2009 was \$2.03, but leaf merchants only paid an average of \$1.60. As a response, the government revoked the work permits of senior leaf merchant managers, focusing particularly on Limbe Leaf. Moreover, in 2009 the CEOs of the main leaf merchants were deported. In addition, President Mutharika named individuals within the industry who were 'exploiting' the country (including figures in the TCC seen to be too close to leaf merchants). Some statements had strong racial connotations (as company managers are often white South Africans, Zimbabweans or Malawians).

For their part, leaf merchants argue that minimum prices led to an over-supply of Malawian burley in the 2008/9, 2009/10 and 2010/11 seasons. Furthermore, they became less willing to 'mop up the market' and buy all tobacco at stipulated minimum prices. Further changes to the institutional framework included new producer organizations and credit providers, and the liberalization of the provision of hessian (which is no longer controlled by TAMA).

Smallholder Profits in 2009/10

We now consider smallholder profits in 2009/10. Table 6 shows that smallholder net margins using credit increased from 52.2 cents per kilogram in 2003/4 to 63.59 cents per kilogram in 2009/10 (mainly due to higher auction floor prices – \$1.10 to \$1.80 – compensating for substantial cost increases: see Prowse 2011). This 6-year period saw a doubling (in dollar terms) of nursery and land costs, loan costs (where lower interest rates have been offset by an increase in fertilizer costs by a factor of 2.3) and *chigaffa* costs. Marketing preparation costs also increased (in dollar terms) by a factor of 2.4. Smallholders' net margins were indeed in the region of 30 per cent (as assumed in the costs of production informing minimum prices).⁵⁰ Overall, then, in nominal terms, we find that smallholder margins increased by 11.39 cents per kilogram. However, in real terms, when we use the rural consumer price index to deflate

⁴⁹ In addition to not meeting minimum prices, merchants resisted these measures by rejecting bales that they felt were worth less than the minimum auction price, ostensibly due to NTRM or mixed grades. These bales were presented on the floors again weeks later, but only after the TCC had lowered the grade, lowering price and increasing the chance of sale.

⁵⁰ Fertilizer subsidies were not provided for cash crop production in the 2009/10 season.

Table 6. Smallholder burley tobacco costs of production 2009/10 – Kasungu

	MWK	MWK per kilogram
1. Production costs	61,649.08	123.30
2. Marketing costs	25,660.35	51.32
3. Total costs	87,309.43	174.62
4. Gross proceeds	135,000.00	270.00
5. Net margin (4 – 3)	47,690.57	95.38
MWK47,690.57 = US\$317.94	MWK95.38 per kilogram = US\$0.64 per kilogram	

Notes: Based on 500 kg/1 acre/five bales/US\$1.80 per kilogram. MWK150 = US\$1.

Table 7. Smallholder burley tobacco costs of production using different marketing channels, 2009/10 – Kasungu

	Auction floors (MWK)	District market (MWK)	Trader/IB (MWK)
1. Production costs	52,686.67	52,686.67	52,686.67
2. Marketing costs	25,660.35	17,060.35	2500.00
3. Total costs	78,347.02	69,747.02	55,186.67
4. Gross proceeds			
Auction floors = MWK270 per kilogram	135,000.00		
Cross-border trade = MWK270 per kilogram		135,000.00	
Trader/IB = MWK135 per kilogram			67,500.00
5. Net margin (4 – 3)	56,652.98	65,252.98	12,313.33
MWK per kilogram	113.31	130.51	24.63
US\$	377.69	435.02	82.09
US\$ per kilogram	0.76	0.87	0.16

Notes: Based on 500 kg/1 acre/five bales/US\$1.80 per kilogram. MWK150 = US\$1. No credit.

smallholder earnings in kwacha (MWK) in 2009/10, we find a loss of purchasing power equivalent to MWK8.04 per kilogram (or 14.3%) from 2003/4 to 2009/10.⁵¹

Marketing channels In 2009/10, marketing channels for burley included the auction floors, district markets and IBs. The rationale for AHL opening district-level markets was to reduce farmers' transport costs, reduce delays at auction, increase the speed with which farmers could access income (reducing interest payments) and, importantly, to reduce the cross-border trade. Just as in 2003/4, the choice of marketing channels alters smallholder profits (for full details, see Prowse 2011). Table 7 compares net margins in 2009/10 for the auction floors, district markets and IBs. Just as in 2003/4, Table 7 uses the same intensive model as Table 6, but without credit. Table 7 suggests that a non-credit grower in 2009/10 received a net profit of 76 cents per kilogram from the auction floors (compared to 59 cents per kilogram in

⁵¹ We used the national Rural Consumer Price Index supplied by the National Statistics Office, Zomba, and included only 6 months' inflation for both 2004 and 2010 (reflecting the timing of payments during the marketing season).

Table 8. Levies and deductions on the auction floors in 2010

TCC levy	0.10 cents per kilogram
AHL levy	2.5% of gross proceeds
Hessian levy (collected by TAMA)	0.30 cents per bale
ARET levy	1% of gross proceeds
TAMA/NASFAM levy	0.70 cents per kilogram
TCC classification levy	0.35 cents per kilogram
Withholding tax of 7%	Not applied to smallholders
Transport	Variable

Source: Tobacco Control Commission, interviews in Kasungu.

2003/4). However, selling at Chinkhoma improves the return to 88 cents per kilogram through a reduction in transport costs (from 13.47 cents per kilogram to 1 cent per kilogram). The higher prices at auction (from \$1.10 to \$1.80) also allowed IBs to pay higher prices (90 cents per kilogram, up from 37 cents in 2003/4) to farmers who desire instant cash or a convenient channel to sell low-grade leaf.

Overall then, in nominal terms, a non-credit grower using the auction floors improved his or her net margin by 17.02 cents per kilogram between 2003/4 and 2009/10. Growers using the CBT/district markets improved by 45.77 cents, and those utilizing IBs by 14.22 cents, during this time period. But to what extent do these nominal changes translate into a real-terms gain or loss? A non-credit grower using the auction floors realized a loss of purchasing power from net profits equivalent to MWK2.61 per kilogram (a 4.1% real loss); those using the CBT/district markets realized a gain in purchasing power equivalent to MWK48.83 per kilogram (a 109.7% real increase); while those using IBs realized a real-terms gain equivalent to MWK20.28 per kilogram (or a real increase of 855.8%, due to the very low margins for the IB channel in 2003/4). While it would be highly beneficial to compare producer prices to international tobacco prices, a reliable index does not exist (partly because exports/imports of unmanufactured tobacco are often intra-company transfers). The closest comparators are producer prices in adjacent countries: in Mozambique, producer prices increased by 15 per cent over this time period (FAO 2011), considerably less than the 64 per cent increase in Malawi.⁵²

Levies for Tobacco-Related Institutions in 2009/10

Table 8 illustrates the levies and deductions at auction in 2009/10. It shows that Auction Holdings' levy was reduced from 3.25 per cent of gross proceeds to 2.5 per cent, but this was offset by a TCC classification levy (as the TCC now performs this function). We notice that the other levies all stayed the same.

In 2009/10, deductions amounted to 8.03 cents per kilogram, which represents 12.6 per cent of smallholders' net margin, similar to the 12.4 per cent in 2003/4. Unfortunately, our research was unable to elicit information regarding the profits/rents accrued by leaf merchants through processing and exporting burley in 2009/10.

⁵² Informants in the industry suggest that FAO figures for tobacco are highly unreliable.

Governance in 2009/10

We find substantial changes to the governance of the segment in 2009/10. First, Stancom and Dimon – the second- and third-largest leaf merchants globally – merged in 2006, creating Alliance One. In Malawi, this created a tussle at the top of the industry. In 2007, Alliance One took over the lead firm role by pricing Limbe Leaf out of the market. Prices went as high as US\$9.50 per kilogram. In addition, two further players entered the market. First, the government, through Auction Holdings, created a purchasing company – Malawi Leaf – to try to upgrade state involvement in the segment and inject greater competition at auction. In the first few days, Malawi Leaf bought up to 26 per cent of leaf at higher prices than Limbe Leaf and Alliance One. In the following weeks, this market share slumped to less than 1 per cent. Malawi Leaf encountered two problems: processing and export markets. It had to rent processing capacity off Alliance One, which was expensive and caused delays. Malawi Leaf also exported some tobacco to Egypt. As Van Donge (2002a) highlights, the Egyptian market is mainly for low-quality burley and companies there have a reputation for not honouring contracts. The second new player on the floors – Premium TAMA – is a subsidiary of Premium Tobacco Holdings, with TAMA owning 14 per cent. This new entrant started constructing its own processing plant (to overcome larger firms' control of capital goods).⁵³ Moreover, Japan Tobacco International (JTI) acquired Africa Leaf and started sourcing tobacco from Malawi by integrating backwards. This illustrates manufacturers' desire to increase control over production. JTI's purchase of Africa Leaf not only represents a loss of business to the remaining leaf merchants (as they rarely sell to JTI now), but serves as an example of what might occur if merchants do not conform to the demands of manufacturers. While the new players increased competition, buying tobacco in Malawi remains a structured affair: the new share-out was 30 per cent AO, 29 per cent LL, 14 per cent JTI, 14 per cent Premium/TAMA, 10 per cent Malawi Leaf and 3 per cent ATC. While informants suggest that smaller firms are now able to increase daily market share without intimidation by larger companies, smaller firms still tend to be price takers rather than makers.

Systemic Efficiency in 2009/10

The final component of the 2009/10 season is systemic efficiency. Here, we find a substantial increase in contract farming. In 2008 and 2009, 40 and 60 million kg of burley were produced through contract farming, respectively (representing roughly 30% of total burley production). In 2010, this dropped back to 40 million kg (20% of the crop). Alliance One expanded operations into Ntchisi, Zomba and Namwera, and created their own clubs, with credit supplied through tripartite agreements with Opportunity International and National Bank. In the 2008/9 season, Alliance One operated a 'silent' auction for contracted tobacco at Chinkhoma. In 2009/10, all major merchants did so.

Contract farming is a contentious issue within academic and policy debates (for recent overviews, see Oya 2012; Prowse 2012). From a political economy perspective, contract farming can, *inter alia*, contribute to: a loss of autonomy and control over the farm; dependency on the firm and a form of self-exploitation in which smallholders bear all production risk; an intra-household distribution of labour/income that is detrimental to women's interests; and substantial spillover effects in local communities and markets, where reduced food

⁵³ TAMA also has a 10% stake in Kanengo Tobacco Processors. Two further small companies in 2009/10 were the Associated Tobacco Company and RWJ Wallace.

crop production can lead to higher food prices in local markets, or where the provision of inputs for contract farmers can lead to thinner spot markets and higher prices for non-participants (see Singh 2002). It is fair to say that the risks for firms are also significant: smallholders may side-market both inputs and produce, and a widely dispersed smallholder population increases transaction costs (compared to contracting large farms). But the power balance in these partnerships is almost always tilted towards the firm. This is the baseline from which contract farming with smallholders in sub-Saharan Africa needs to be considered (see Oya 2012).

In Malawi, leaf merchants wish to aggressively expand contract farming due to pressure from cigarette manufacturers for full traceability, but as of July 2012 this has been resisted by government (for a full discussion, see Moyer-Lee and Prowse 2012). At the national level, a complete shift to contract farming has repercussions for ancillary industries: fertilizer suppliers, transporters and commercial graders. Moreover, pressure to disband the auction floors underestimates their role in facilitating the industry in a highly capital-constrained context: Auction Holdings recovers the costs of goods and services from growers' gross proceeds on behalf of institutions via the centralized system of sales. Closing the auction floor system may limit the ability of independent credit, input and transport providers to offer services to smallholders (reducing competition, but creating opportunities for leaf merchants). Moreover, it is understandable if government is reticent about closing the auction floors, due to the alleged smuggling when companies were directly contracting large-scale estates.

Nevertheless, there are signs that an increasing proportion of smallholder burley will be contract farmed. Contracted burley has received higher prices as the quality is better. Second, many growers prefer 'silent' auctions because price disagreements do not involve the TCC: the buyer and grower resolve the issue – which, growers claim, is faster and more efficient. And, most importantly, contract farming allows leaf companies full traceability. In an industry defined by its pariah status, cigarette manufacturers are desperate to improve public relations (and prevent pressure on the industry by anti-tobacco lobbies). This has led cigarette manufacturers to make increasingly stringent demands on suppliers regarding traceability and credence issues such as the elimination of child labour. Contract farming, where the entire production process is overseen by leaf merchant agronomists, is one way of addressing these credence concerns. Furthermore, manufacturers also now demand that suppliers collect detailed data on contracted growers to provide greater oversight and control.⁵⁴ A summary of the major changes in the segment between 2003/4 and 2009/10 is shown in Table 9.

The major changes in the institutional framework between 2003/4 and 2009/10 were the creation of district markets and the introduction of minimum prices. Global credence concerns – such as the CC32 bill and green tobacco sickness – also influenced the segment, but to a lesser extent. Turning to profits/rents, we find that smallholders switching from the CBT to district markets realized the greatest nominal and real increase in net profits during the 6-year period. This highlights the importance of reforming the auction floor structure. Despite the introduction of minimum prices and greater competition on the floors, smallholders using the auction floors suffered a small real-terms loss.

We also find major changes in governance: in 2009/10, Alliance One was the dominant leaf buyer and new leaf merchants increased competition at auction. However, greater state intervention has led to greater conflict within the industry. It is unclear whether such a confrontational stance with leaf merchants will bear fruit in the long term. The trust and

⁵⁴ For example, Phillip Morris International sends model questionnaires to suppliers in Malawi, telling them exactly the data they require for each grower.

Table 9. Summary of major changes in value chain segment, 2003/4 to 2009/10

<i>Institutional framework</i>	Creation of district markets Introduction of minimum prices, more government intervention More credence concerns (CC32 bill, green tobacco sickness)
<i>Profits/rents</i>	
Net margin using credit and the auction	Nominal increase of 11.39 cents per kilogram (real-terms loss of MWK8.04 per kilogram/14.3%)
Net margin not using credit but using the auction	Nominal increase of 17.02 cents per kilogram (real-terms loss of MWK2.61 per kilogram/4.1%)
Net margin not using credit and using the CBT/district markets	Nominal increase of 45.77 cents per kilogram (real-terms gain of MWK48.83 per kilogram/109.7%)
Net margin not using credit and using intermediate buyers	Nominal increase of 14.22 cents (real-terms gain of MWK20.28 per kilogram/855.8%) Institutional levies remain broadly similar (at around 12.5% of net margins)
<i>Governance</i>	Alliance One became the dominant leaf buyer New leaf buyers increased competition at auction Greater conflict between government and leaf merchants
<i>Systemic efficiency</i>	Rapid increase in contract farming

open communication channels between actors evident in the 2003/4 season no longer existed in 2009/10. Companies appeared to be renegeing on their long-standing 'obligation' to purchase all Malawian tobacco (exacerbating balance-of-payments deficits). Finally, we also find that a much greater proportion of smallholder burley is grown through contract farming (with implications for smallholders, the auction floors and ancillary industries), driven partly by the manufacturers' need for traceability from seed to cigarette.

CONCLUSION

The reform of burley tobacco production and marketing in the 1990s, especially after democratization and the arrival of Bakili Muluzi's UDF government in 1994, was the first major attempt to change the colonial structure of Malawi's economy (Harrigan 2001). Smallholders now independently produce the majority of Malawi's tobacco. But during the UDF era, smallholder profits from burley appear to have been limited by a cartel of leaf merchants, who vigorously protected their control of, and rents from, the value chain segment. What is less clear is the extent to which the political elite's close links with Limbe Leaf led to tacit political acceptance of the cartel. For example, within the industry it is claimed that Limbe Leaf maintained very close political ties to both the UDF and MCP (and this is one reason why the late President Mutharika targeted Limbe Leaf managers most during his confrontation with leaf merchants). It is also unclear whether the UDF's interests in the transport sector delayed reforms of the inefficient marketing structure.

Our comparison shows that President Mutharika's government implemented substantial changes to the industry: minimum prices; new buyers at auction; and new district markets. How should we understand this more interventionist stance in the industry? One way to view these attempts to impart more competition, increase producer prices, foreign exchange

earnings and government revenue from tobacco is that such measures were the counterpart to expenditures on the Farm Input Subsidy Programme and investments in infrastructure. It is expensive to ensure food security through subsidizing smallholder maize production in Malawi, as is upgrading dilapidated roads and bridges. In addition to stop-go flows of official development assistance, Malawi's key source of foreign exchange and government revenue comes from tobacco. But Mutharika's confrontational stance with leaf merchants perhaps underestimated the corporate power within the industry and region. It also jeopardized the informal obligation of merchants to 'mop up the market' each year. It is unclear whether the apparent increase in unprocessed tobacco exports from Malawi is linked to the conflict in the industry. In addition, it is not clear whether Mutharika's conflict with the leaf merchants contributed to chronic shortages of foreign exchange and fuel in 2011. Finally, as of August 2012, President Joyce Banda's government was yet to finalize its policy on tobacco. Early indications suggested a thawing of relations with leaf merchants and a debate about the appropriate role of contract farming within the industry.

This brings us to broader political-economic questions. First, there is the conduct of donors. Despite USAID being instrumental in supporting burley reform in the 1990s, the US has not reformed its trade regime to allow Malawian burley producers to compete unhindered against its own tobacco farmers. To what extent is this due to lobbying by US tobacco producers? And for how long can the US maintain such a trade regime? The second question concerns the global structure of the tobacco industry. The governance of the value chain segment described in this paper is only a reflection of the power that key cigarette manufacturers – Philip Morris International, British American Tobacco and Japan Tobacco International – have over suppliers in low-income countries. It may be the case that smallholders now grow the majority of Malawi's premier export crop, but the extent to which Malawi's economy and society can be sustained, let alone transformed, through growing tobacco may well be determined by how government challenges entrenched interests within Lilongwe and negotiates with global leaf merchants and cigarette manufacturers.

REFERENCES

- ARET (Agricultural Research and Extension Trust), 2004. *Modern Farming*. Lilongwe, Malawi: Agricultural Research and Extension Trust.
- Chapola, G., 1994. *Malawi Burley Tobacco Handbook*. Lilongwe, Malawi: Tobacco Research Institute of Malawi (TRIM).
- Daviron, B. and P. Gibbon, 2002. 'Global Commodity Chains and African Export Agriculture'. *Journal of Agrarian Change*, 2 (2): 137–61.
- Diagne, A. and M. Zeller, 2001. *Access to Credit and Its Impact in Welfare in Malawi*. IFPRI Research Report 116. Washington, DC: International Food Policy Research Institute.
- Eurostat, 2011. 'Statistical Database – External Trade Detailed Data', http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (accessed 1 September 2011).
- FAO (Food and Agriculture Organization of the United Nations), 2011. 'FAOSTAT – Agriculture', http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (accessed 1 September 2011).
- Gereffi, G. and M. Korzeniewicz, 1994. *Commodity Chains and Global Capitalism*. London: Praeger.
- Gereffi, G., J. Humphrey and T. Sturgeon, 2005. 'The Governance of Global Value Chains'. *Review of International Political Economy*, 12 (1): 78–104.
- Gereffi, G., J. Humphrey, R. Kaplinsky and T.J. Sturgeon, 2001. 'Introduction: Globalisation, Value Chains and Development'. *IDS Bulletin*, 32 (3): 1–8.
- Harrigan, J., 2001. *From Dictatorship to Democracy: Economic Policy in Malawi, 1964–2000*. Aldershot: Ashgate.
- Harvey, D., 1990. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Blackwell.
- Hayward, N., 2004. *Malawi Tobacco – Preliminary Stakeholder Analysis*. Washington, DC: World Bank.
- Humphrey, J. and H. Schmitz, 2001. 'Governance in Global Value Chains'. *IDS Bulletin*, 32 (3): 19–29.

- Jaffee, S., 2003. *Malawi's Tobacco Sector: Standing on One Strong Leg is Better Than on None*. Washington, DC: World Bank.
- Kabambe, S.D., 2007. *An Economic Analysis of the Impacts of International Trade Liberalisation on Smallholder Export Crop Supply Chains and Producers in Malawi*. Unpublished PhD thesis, Imperial College, University of London.
- Kaplinsky, R., 2005. *Globalization, Poverty and Inequality: Between a Rock and a Hard Place*. Cambridge: Polity Press.
- Kaplinsky, R. and M. Morris. 2000. *Spreading the Gains from Globalisation: What Can Be Learned from Value Chain Analysis?* IDS Working Paper 110, Brighton, UK: Institute of Development Studies, University of Sussex.
- Keyser, J. and V. Lungu, 1997. *Malawi – Agricultural Comparative Advantage*. Washington, DC: East and Southern Africa Agriculture Division, World Bank.
- Kydd, J., 1984. 'Malawi in the 1970s – Development Policies and Economic Change'. In *Malawi: An Alternative Pattern of Development*. Conference Proceedings, Centre for African Studies, University of Edinburgh.
- Lipsey, R.G. and A. Crystal, 1999. *Principles of Economics*, 9th edn. Oxford: Oxford University Press.
- Lynx Associates, 2002. *Press Agriculture Limited Consultancy – Situation Analysis Market Assessment and Options Study*. Lilongwe, Malawi: Lynx Associates.
- Matthews, A. and C. Wilshaw, 1992. *Fodya: The Malawi Tobacco Handbook*. Blantyre, Malawi: Central Africana Limited.
- Mkandawire, M.L.C. and S. Trust, 1999. *Poverty, Democracy and Macro Economic Management: The Case of Malawi*. Harare: SAPES Books.
- Moyer-Lee, J. and M. Prowse, 2012. *How Traceability is Restructuring Malawi's Tobacco Industry*. IOB Working Paper 2012.05, Institute of Development Policy and Management (IOB), University of Antwerp, Belgium.
- Mwasikakata, M., 2003. *Tobacco: An Economic Lifeline? The Case of Tobacco Farming in the Kasungu Agricultural Development Division, Malawi*. Sectoral Activities Programme Working Paper 184, International Labour Office, Geneva, Switzerland.
- Nakhumwa, T. and I. Minde, 1996. *Informal Cross Border Trade In Malawi*. Lilongwe, Malawi: Agricultural Policy Research Unit, Bunda College, University of Malawi.
- Negri, M. and G.G. Porto, 2008. *Burley Tobacco Clubs in Malawi: Non-Market Institutions for Exports*. Policy Research Working Paper 4561, The Development Research Group, Trade Team, World Bank, Washington, DC.
- Orr, A., 2000. 'Green Gold? Burley Tobacco, Smallholder Agriculture, and Poverty Alleviation in Malawi'. *World Development*, 28 (2): 347–63.
- Oya, C., 2012. 'Contract Farming in Sub-Saharan Africa: A Survey of Approaches, Debates and Issues'. *Journal of Agrarian Change*, 12 (1): 1–33.
- Peters, P., 2006. 'The Differential Effects on Rural Income and Poverty of a Decade of Radical Change in Malawi, 1986–97'. *Journal of Development Studies*, 42 (2): 322–45.
- Ponte, S., 2002. 'Brewing a Bitter Cup? Deregulation, Quality and the Re-Organization of Coffee Marketing in East Africa'. *Journal of Agrarian Change*, 2 (2): 248–72.
- Poulton, C., J. Kydd and S.D. Kabambe, 2007. *Case Study on Malawi Tobacco*. Washington, DC: CCAA Project, World Bank.
- Prowse, M., 2009. 'Becoming a Bwana and Burley Tobacco in the Central Region of Malawi'. *Journal of Modern African Studies*, 47 (4): 575–602.
- Prowse, M., 2011. *A Comparative Value Chain Analysis of Burley Tobacco in Malawi – 2003/04 and 2009/10*. IOB Working Paper 2011: 09, Institute of Development Policy and Management, University of Antwerp, Belgium.
- Prowse, M., 2012. *Contract Farming in Developing Countries – A Review*. A Savoir No. 12. Paris: Agence Française de Développement.
- Reardon, T., C.B. Barrett, J.A. Berdegue and J.F.M. Swinnen, 2009. 'Agrifood Industry Transformation and Small Farmers in Developing Countries'. *World Development*, 37 (11), 1717–27.
- Riley, B., 1997. *Mid-Project Review – Smallholder Agribusiness Development Project*. Washington, DC: Agricultural Cooperative Development International.
- SADP (Smallholder Agribusiness Development Project), 1999. *The Squeeze of the Market System: Improving the Profit Margin between Production Costs and Sales*. Lilongwe, Malawi: Smallholder Agribusiness Development Project.
- Singh, S., 2002. 'Multi-National Corporations and Agricultural Development: A Study of Contract Farming in the Indian Punjab'. *Journal of International Development*, 14: 181–94.
- Stanbrook, C., 2005a. *Preliminary note on Tobacco Sales in Malawi*. Unpublished note, 23 May, Brussels, Belgium.
- Stanbrook, C., 2005b. *The Auction Floors and The Buyers Cartel Note for TAMA Press Conference*, 8 August, Lilongwe, Malawi.
- Stevens, C., 2004. *Agriculture in the Doha Round and EPA Negotiations: A Review of the Issues for COMESA/SADC*. FAO Clarification Workshop COMESA/SADC, 13–16 December. Brighton: Institute of Development Studies, University of Sussex.

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- Sturgeon, T.J., 2001. 'How Do We Define Value Chains and Production Networks?' *IDS Bulletin*, 32 (3): 9–18.
- TCC (Tobacco Control Commission), 2004. *Season Review 2004*. Tobacco Control Commission presentation at Annual Tobacco Seminar, Mangochi, Malawi.
- TEAM (Tobacco Exporters Association of Malawi), 2002. *Cross Border Trade: Task Force Recommendations Lilongwe*. Lilongwe, Malawi.
- Tobin, R.J. and W.I. Knausenberger, 1998. 'Dilemmas of Development: Burley Tobacco, the Environment and Economic Growth In Malawi'. *Journal of Southern African Studies*, 24 (2): 405–24.
- US Government, 1999. *US Generalized System of Preferences Guidebook*. Washington, DC: US Trade Representative, Executive Office of the President.
- US Government, 2000. *Trade and Development Act of 2000 – Public Law 106–200*. Washington, DC: US Congress.
- US Government, 2004. *Harmonized Tariff Schedule of the United States, 2004, Annotated for Statistical Reporting Purposes – Chapter 24 Tobacco and Manufactured Tobacco Substitutes*. Washington, DC: Executive Office of the President.
- US Government, 2010. *Harmonized Tariff Schedule of the United States, 2004, Annotated for Statistical Reporting Purposes – Chapter 24 Tobacco and Manufactured Tobacco Substitutes*. Washington, DC: Executive Office of the President.
- USAID, 1991. *Agricultural Sector Assistance Program (ASAP) Vol. I: Program Assistance Approval Document*. Lilongwe, Malawi: USAID.
- Van Donge, J.K., 2002a. 'Disordering the Market: The Liberalisation of Burley Tobacco in Malawi in the 1990s'. *Journal of Southern African Studies*, 28 (1): 89–115.
- Van Donge, J.K. 2002b. 'The Fate of an African *chaebol*: Malawi's Press Corporation after Democratisation'. *Journal of Modern African Studies*, 40 (4): 651–83.
- World Bank 2004a. *Proposal for Additional Bank Budget for Poverty and Social Impact Analysis – Malawi: Reform of Tobacco Marketing*. Unpublished note. Washington, DC: World Bank.
- World Bank, 2004b. *Proposed Structural Adjustment Credit Policy Matrix*. Unpublished. Lilongwe, Malawi: World Bank.
- WTO (World Trade Organization), 2010. *Trade Policy Review – Report by the Secretariat Malawi*. Geneva: WTO Secretariat, World Trade Organization.
- Zeller, M., A. Diagne and C. Mataya, 1998. 'Market Access by Smallholder Farmers in Malawi – Implications for Technology Adoption, Agricultural Productivity and Crop Income'. *Agricultural Economics*, 19: 219–29.